

## CLAIMS

We claim:

1. An EFFF apparatus, comprising a pair of plate electrodes electrically isolated from the fractionation flow channel.
2. The apparatus of Claim 1 wherein the electrical isolation is obtained with a thin, non-permeable insulating coating on the flow channel side of each electrode.
3. The apparatus of Claim 1 wherein the coating is a PTFE coating.
4. An EFFF process wherein electrodes are electrically isolated from the fractionation flow channel.